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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Application Number 09/535,206

Filing Date March 27, 2000

Inventor(s) Muralidharan S. KODIALAM

Group Art Unit 2143

Examiner Name A. Boutah

Attorney Docket Number 29250-000941/US

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**ENCLOSURES (check all that apply)**☐ Fee Transmittal Form☐ Fee Attached☐ Amendment☐ After Final☐ Affidavits/declaration(s)☐ Extension of Time Request☐ Express Abandonment Request☐ Information Disclosure Statement☐ Certified Copy of Priority Document(s)☐ Response to Missing Parts/ Incomplete Application☐ Response to Missing Parts under 37 CFR 1.52 or 1.53☐ Assignment Papers (for an Application)☐ Letter to the Official Draftsperson and \_\_\_\_\_ Sheets of Formal Drawing(s)☐ Licensing-related Papers☐ Petition☐ Petition to Convert to a Provisional Application☐ Power of Attorney, Revocation Change of Correspondence Address☐ Terminal Disclaimer☐ Request for Refund☐ CD, Number of CD(s) \_\_\_\_\_☐ After Allowance Communication to Group☐ LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims)☒ Appeal Communication to Group (Reply Brief)☐ Proprietary Information☐ Status Letter☐ Other Enclosure(s) (please identify below):

Remarks

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name

Harness, Dickey &amp; Pierce, P.L.C.

Attorney Name  
John E. CurtinReg. No.  
37,602

Signature

Date

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**Application Number: 09/535,206**

**Filing Date: March 27, 2000**

**Appellants: KODIALAM et al.**

**John E. Curtin  
For Appellant**

**REBUTTAL BRIEF**

**This is in response to the Examiner's Answer mailed August 27, 2004**



PATENT  
29250-000941/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

**RECEIVED**

OCT 29 2004

Appellants: Muralidharan S. KODIALAM et al. Appeal No. \_\_\_\_\_  
Serial No.: 09/535,206 Group: 2143  
Filed: March 27, 2000 Examiner: A. Boutah  
For: ROUTING OF BANDWIDTH GUARANTEED PATHS WITH  
RESTORATION IN AN INFORMATION NETWORK

Technology Center 2100

**REBUTTAL BRIEF**

U.S. Patent and Trademark Office  
220 20<sup>th</sup> Street S.  
Customer Window Mail Stop Appeal Brief - Patents  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

October 27, 2004

Dear Sir:

**REPLY TO EXAMINER'S ANSWER**

Appellants have read the Examiner's Answer dated August 27, 2004 and provide these additional comments in reply.

Initially, Appellants note that the Examiner's Answer contains page number references to the primary reference, "Design of a Fast Restoration Mechanism for Virtual Path-Based ATM Networks," by Chao-Ju Hou ("Hou"). However, the copy of Hou supplied to Appellants does not contain these page numbers.

Nonetheless, Appellants will attempt to address the issues raised by the Examiner.

**A.) Reply to the Examiner's Answer Regarding Claims 1-4**

In its initial Brief, the Appellants indicated that Hou failed to disclose:

- (a) the distribution of information to nodes in a network related to bandwidth;
- (b) the distribution of information to nodes in a network related to total bandwidth reserved by each link in a network for all active paths currently defined in the network and total bandwidth reserved by each link in a network for all backup paths currently defined in a network.

In response, the Examiner argues that Hou discloses on page 361, third paragraph, line 1 to page 362, line 13 and in "preliminaries" section (first and fourth paragraphs), the distribution of information related to bandwidth.

To further aid the Board, Appellants submit claim 1 in its entirety below:

1. A method of *dynamically* establishing restorable paths in an information network *in response to arriving traffic requests*, the network having a number of nodes and links between corresponding pairs of nodes, comprising:

receiving requests at a first node of the network for transmission of traffic to a second node of the network, wherein a given request specifies a desired transmission bandwidth for an active path and a backup path to be established between the first and the second nodes;

distributing information to nodes in the network concerning (a) total bandwidth reserved by each link in the network for all active paths currently defined in the network, and (b) total bandwidth reserved by each link in the network for all backup paths currently defined in the network; identifying *potential* active links in the network for an active path *in response to a given request*, wherein the potential active links each have an available bandwidth at least equal to the bandwidth specified by the given request;

identifying *potential* backup links in the network for a backup path for restoring the active path *after the given request has arrived*, wherein the potential backup links each have an available bandwidth at least equal to the desired transmission bandwidth specified by the given request; and

formulating an active and a backup path *for each given request* from among the *potential* active links and the *potential* backup links identified in response to the given request (italics added).

As Appellants noted in their opening Brief, though Hou discusses bandwidth, it does not disclose the distribution of information to nodes concerning bandwidth.

To elaborate, Appellants submit that Hou does not distribute information to nodes concerning bandwidth “in response to arriving traffic requests” as in claims 1-4 of the present invention.

As can be seen from claim 1, the present invention is aimed at “dynamically establishing restorable paths ... in response to arriving traffic requests.” Each of the steps in claim 1, e.g., reception, distribution, identification and formulation is triggered by the receipt of a given request.

As Appellants pointed out in the Background of the Invention section of the present specification (page 3), “there is a need for a restoration mechanism that operates dynamically, wherein an active and an associated backup path are determined for each request as it arrives and in such a manner as to use available network resources efficiently.”

In sum, the present invention’s goal is to continuously distribute bandwidth information to nodes in order to identify and formulate new active and backup paths as each active request arrives. Hou, in contrast, only calculates active or backup paths periodically, i.e., either initially or upon the need to restore a link due to a fault.

It is the dynamic establishment of active and backup paths which occurs each time a traffic request is received which sets the present invention apart from Hou.

Appellants respectfully submit that Hou teaches away from the distribution of bandwidth information each time a new traffic request is received. That is, there is no

need for Hou to distribute such bandwidth information each time a traffic request is received because Hou is only concerned with the selection of active and backup links at initialization or during restoration of a link. Hou is simply not concerned with determining potential active and backup links each time a traffic request is received, as are the claims of the present invention.

In addition, Appellants note that claim 1 identifies potential active links and potential backup links. That is, each time a request is received, potential active and backup links are established even though these links may not be used. In contrast, Hou waits until a fault occurs at a link to determine active and backup paths.

**B.) Reply to the Examiner's Answer Regarding Claim 5**

Similar to claim 1, claim 5 also includes the dynamic establishment of restorable paths in response to traffic requests.

For the reasons set forth above with respect to claim 1, claim 5 is patentable over Hou because Hou fails to disclose or even suggest the dynamic establishment of paths each time a given traffic request is received as in the claims of the present invention.

Claim 5 also requires the use of a "maximum total bandwidth reservation to determine the required bandwidth reservation among active links" which is thereafter also used to determine a bandwidth reservation for each backup link.

The Examiner argues that Hou's use of links with "sufficient" bandwidth amounts to the use of a maximum total bandwidth reservation. Appellants respectfully disagree. Appellants respectfully submit that the Examiner has mistakenly reversed both the terminology and meaning of maximum total bandwidth as used in claim 5. Claim 5 uses

“a maximum total bandwidth reservation among active links.” In contrast, Hou makes use of a maximum link load of a backup link, not an active link.

Accordingly Appellants respectfully submit that claims 5 and 7-10 are patentable over Hou.

**C.) Response to Examiner's Answer Regarding Claim 6**

Because claim 6 depends on claim 5, Appellants respectfully submit that claim 6 is patentable over Hou for the reasons given above with respect to claim 5.

**CONCLUSION**

For the reasons set forth above, it is clear that the present invention as recited in the Appellants claims are patentable over the cited reference to Hou. Therefore, Appellants respectfully request that the Board reverse the decisions of the Examiner and allow claims 1-10.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C

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